1. (Currently Amended) A method for the analysis, ~~and/or~~ monitoring, or both, of the partial discharge behavior of an electrical operating ~~means, in particular in terms of its development over time, appropriate~~ device, the method comprising:

recording partial discharge data ~~being recorded~~ in ~~processing~~ process state matrices ~~(1)~~, ~~in which~~ the partial discharge data including amplitude ~~(7)~~ of a partial discharge, ~~its~~ phase angle ~~(6)~~ of said partial discharge, and ~~its~~ frequency of occurrence of said partial discharge, ~~is~~ said partial discharge data being depicted ~~in each case~~ in a matrix element ~~(5)~~ of the process state matrix ~~(1), and in that~~;

at a first time, registering a partial discharge process state ~~is registered~~ in a first process state matrix ~~(2) and,~~ ;

at a ~~later~~ second time after said first time, registering a ~~further~~ second partial discharge process state ~~is registered~~ in a ~~further~~ second process state matrix ~~(3),~~; and ~~in that~~ comparing ~~for the purpose of analysis and/or monitoring,~~ the first ~~(2)~~ and the second ~~(3)~~ process state ~~matrix are compared with the aid of~~ matrices, said comparing comprising comparison and scaling ~~methods~~.

2. (Currently Amended) The method as claimed in claim 1, ~~characterized in that, in~~ further comprising, for each ~~case in a~~ matrix element ~~(5)~~ of the process state matrix ~~(1)~~, depicting the amplitude ~~(7)~~ of a partial discharge ~~is depicted~~ as a function of the phase angle ~~(6),~~ ; and

assigning each matrix element ~~(5) additionally being assigned~~ an associated frequency of occurrence.

3. (Currently Amended) The method as claimed in ~~either of claims 1 and 2~~Claim 1, ~~characterized in that, in~~ further comprising:

for each ~~case from the~~ process state ~~matrices (2, 3)~~matrix, first ~~of all~~ determining state parameters (Z_n)~~, in particular scaled state parameters (Z_n), are determined~~ ; and ~~these~~

comparing said state parameters (Z_n) ~~are compared~~ for ~~the purpose of~~ analysis, ~~and/or~~ monitoring, or both, of the states of the insulation of said electrical operating device.

4. (Currently Amended) The method as claimed in claim 3, ~~characterized in that~~ further comprising:

determining the variation over time of the state parameters (Z_n) ~~determined~~ from ~~various further~~ process state matrices ~~(3) is used for the assessment of~~; and

assessing the change over time or ~~for~~ the prognosis of the further change over time of the partial discharge behavior based on said variation over time of the state parameters (Z_n).

5. (Currently Amended) The method as claimed in ~~one of the preceding claims~~Claim 1, ~~characterized in that~~ further comprising:

weighting, scaling, or both, the individual matrix elements ~~(5) experience different weighting and/or scaling~~differently, depending on the amplitude, ~~(7) or depending on~~ the phase angle, ~~(6)~~ or ~~depending on~~ the frequency of occurrence, before ~~they~~ said individual matrix elements are ~~supplied to the~~ used in comparison and scaling ~~method~~.

6. (Currently Amended) The method as claimed in ~~one of the preceding claims~~Claim 1, ~~characterized in that the~~ wherein comparison ~~method~~ comprises ~~a step in which~~ forming similarity values ~~are formed,~~ which reproduce the difference between the process state matrices ~~(2, 3), the process state matrices (2, 3) preferably being visualized in a representation of the amplitudes (7) as a function of the phase angle (6) and in an encoding of each such pixel as a function of the frequency of occurrence~~.

7. (Currently Amended) The method as claimed in ~~one of the preceding claims~~Claim 1, ~~characterized in that, in the process state matrices (2, 3), in particular adjacently arranged~~ further comprising:

combining matrix elements ~~(5) are combined~~ of the process state matrices in discrete windows ~~(4),~~; and ~~in that~~

averaging together, scaling together, or both, each of the matrix elements of the process state matrices ~~(2, 3)~~ of a window ~~(4) are in each case averaged and/or scaled together~~

before ~~they are supplied to the~~ using in said comparison ~~method, the windows in particular preferably being defined in the plane covered by phase angles (6) and amplitudes (7)~~.

8. (Currently Amended) The method as claimed in claim 7, ~~characterized in that~~ further comprising:

comparing the contents of corresponding windows ~~(4)~~ of different process state matrices ~~(2, 3) are compared,~~; and ~~in that~~

weighting, scaling, or both, different windows ~~(4)~~ in a process state matrix ~~are weighted and/or scaled~~ differently.

9. (Currently Amended) The method as claimed in ~~either of claims 6 and 7~~Claim 6, ~~characterized in that, in the process state matrices (2,3), in particular adjacently arranged~~ further comprising:

combining matrix elements ~~(5)~~ in discrete regions ~~(9, 10)~~ of interest of said process state matrices~~are combined, and in that in particular different discrete regions of interest (9, 10) are preferably scaled and/or weighted differently in the comparison method, the regions (9, 10) of interest in particular preferably being defined in the plane covered by phase angles (6) and amplitudes (7)~~.

10. (Currently Amended) The method as claimed in claim 9, ~~characterized in that~~ further comprising:

dividing up the discrete regions ~~(9, 10)~~ of interest ~~are divided up~~ into discrete windows ~~(4),~~; and ~~in that~~

treating equally the contents of windows ~~(4)~~ of identical regions ~~(9, 10), if appropriate following averaging of the matrix elements of the respective window (4), are treated equally~~ in ~~the~~ said comparison ~~method~~.

11. (Currently Amended) The method as claimed in ~~either of claims 9 and 10~~Claim 9,

~~characterized in that~~ further comprising:

linking state changes obtained from the comparisons of the state parameters obtained from regions ~~(9, 10)~~ of interest ~~are linked mathematically in order~~ to obtain a ~~desired~~ number of state parameters.

12. (Currently Amended) The method as claimed in ~~one of claims 9, 10 or 11~~Claim 9, ~~characterized in that~~ further comprising:

linking state changes obtained from the comparisons of the state parameters obtained from regions ~~(9, 10)~~ of interest ~~are linked mathematically~~ with at least one state parameter obtained from regions ~~judged to be~~ not of interest, ~~in order~~ to obtain a ~~desired~~ number of state parameters.

13. **(Canceled)**

14. (New) The method as claimed in Claim 3, wherein determining state parameters (Z_n) comprises determining scaled state parameters (Z_n).

15. (New) The method as claimed in Claim 6, further comprising:
visualizing the process state matrices in a representation of the amplitudes as a function of the phase angle, and in an encoding of each such pixel as a function of the frequency of occurrence.

16. (New) The method as claimed in Claim 7, further comprising:
defining the windows in the plane covered by phase angles and amplitudes.

17. (New) The method as claimed in Claim 9, further comprising:
weighting, scaling, or both, different discrete regions of interest differently in said comparison,

18. (New) The method as claimed in Claim 17, further comprising: defining the regions of interest in the plane covered by phase angles and amplitudes.

19. (New) A method as claimed in Claim 1, wherein the analysis, monitoring, or both, of the development of the partial discharge behavior of the electrical operating device is performed over time.

20. (New) A method as claimed in Claim 7, wherein combining comprises combining adjacently arranged matrix elements in discrete windows.

21. (New) A method as claimed in Claim 9, wherein combining comprises combining adjacently arranged matrix elements in discrete regions of interest.

22. (New) A method as claimed in Claim 10, wherein treating equally in said comparison is performed after averaging of the matrix elements of the respective window.

23. (New) A method as claimed in Claim 11, wherein said linking comprises mathematical linking.

24. (New) An apparatus for the analysis, monitoring, or both, of the partial discharge behavior of an electrical operating device, the apparatus comprising:
means for recording partial discharge data in process state matrices, the partial discharge data including amplitude of a partial discharge, phase angle of said partial discharge, and frequency of occurrence of said partial discharge, said partial discharge data being depicted in a matrix element of the process state matrix;
means for, at a first time, registering a partial discharge process state in a first process state matrix;
means for, at a second time after said first time, registering a second partial discharge

process state in a second process state matrix; and

means for comparing the first and the second process state matrices, said means for comparing comprising means for comparison and scaling.